

WHAT IS CLAIMED IS:

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1. A method of connecting a line concentrator to other line concentrators in a switching system, wherein a switching unit accommodates said line concentrator, said method comprising the steps of:

analyzing a call received by said switching unit through said line concentrator; and connecting lines that are accommodated by said line concentrator and are connected to the other line concentrators without connecting through said switching unit when said call is detected to be made between said line concentrator and the other line concentrators.

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2. The method as claimed in claim 1, further comprising the steps of:

25 checking a condition of a communication path provided between said line concentrator and said switching unit; and

transmitting an overcrowding-process signal from said line concentrator to said switching unit through a signal path when the communication path is overcrowded,

30 wherein said line concentrator is connected to the other line concentrators without connecting through said switching unit when said switching unit receives the overcrowding-process signal from said line concentrator.

3. A switching system including a switching unit and a line concentrator,  
said switching unit comprising:  
a number-analyzing unit that analyzes a  
5 dial number notified through said line concentrator;  
and  
a line-selecting unit that selects lines  
that are accommodated by said line concentrator and  
are connected to other line concentrators, and  
10 said line concentrator comprising a line-  
connecting unit that connects said lines,  
wherein said line-selecting unit selects  
the lines and directs said line-connecting unit to  
connect said lines together when said number-  
15 analyzing unit determines that said dial number is  
used for connecting said line concentrator to the  
other line concentrators, thereby connecting said  
line concentrator to the other line concentrators.

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4. The switching system as claimed in  
claim 3, wherein said line concentrator further  
25 comprises a signal-transmitting unit transmitting an  
overcrowding-process signal through a signal path to  
said switching unit when a communication path  
provided between said line concentrator and said  
switching unit is determined to be overcrowded,  
30 wherein said switching unit further comprises a  
signal-receiving unit receiving the overcrowding-  
process signal from said signal-transmitting unit,  
and an overcrowding-control unit directing said  
line-connecting unit to connect said lines when said  
35 signal-receiving unit receives the overcrowding-  
process signal from said signal-transmitting unit,  
thereby connecting said line concentrator to the

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other line concentrators.

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5. The switching system as claimed in  
claim 3, wherein said switching unit further  
comprises a number-analysis table including trunk-  
group numbers initially registered for dial numbers  
10 that are used for connecting the line concentrator  
to the other line concentrators, and a line-  
selection table including a chain of idle trunks  
corresponding to a trunk-group number selected from  
said number-analysis table by said number-analyzing  
15 unit by use of said dial number and to a line-  
concentrator number of the line concentrator  
accessed by said dial number, wherein said line-  
selecting unit selects an idle trunk connecting said  
lines from said line-selection table by use of said  
20 trunk-group number and said line-concentrator number.

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6. The switching system as claimed in  
claim 4, wherein said switching unit further  
comprises a line-selecting data table including  
initially registered trunk-group numbers of trunks  
used for connecting the line concentrator to the  
30 other line concentrators by connecting the lines  
when the communication path provided between said  
line concentrator and said switching unit is  
determined to be overcrowded, and a line-selection  
table including a chain of idle trunks corresponding  
35 to a trunk-group number selected from said line-  
selecting data table by said overcrowding-control  
unit and to a line-concentrator number of said line

concentrator connected through an overcrowded communication path to said switching unit, wherein said overcrowding-control unit selects an idle trunk connecting said lines from said line-selection table  
5 by use of said trunk-group number and said line-concentrator number.